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(FILE 'HOME' ENTERED AT 10:40:08 ON 12 DEC 2003)

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, CANCERLIT, JAPIO' ENTERED AT
10:40:48 ON 12 DEC 2003

L1 18411 S (LDL RECEPTOR)
L2 111 S LDL AND (TRANSMEMBRANE DOMAIN)
L3 4 S LDL AND (C TERMINAL TAIL)
L4 1 S L2 AND L3
L5 4 DUPLICATE REMOVE L3 (0 DUPLICATES REMOVED)
L6 75 S L1 AND L2
L7 26 DUPLICATE REMOVE L6 (49 DUPLICATES REMOVED)
L8 4 S L7 AND TERMINAL?
L9 6 S L7 AND TAIL?
L10 4 S L8 AND L6

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*Updated Search
+ consideration
12/12/03 WCOOK*

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L8 4 S L7 AND TERMINAL?
L9 6 S L7 AND TAIL?
L10 4 S L8 AND L6

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L5 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2003 ACS on STN
 AN 2003:301326 CAPLUS
 DN 138:266041
 ED Entered STN: 18 Apr 2003
 TI Assays for the identification of **LDL** receptor signaling
 modulators by monitoring the proteolysis of an **LDL** receptor
 transmembrane domain
 IN Herz, Joachim; May, Petra
 PA Board of Regents, the University of Texas System, USA
 SO PCT Int. Appl., 16 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM G01N033-53
 ICS G01N033-567; G01N033-569
 CC 2-1 (Mammalian Hormones)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003031973	A1	20030417	WO 2002-US32271	20021010
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003077672	A1	20030424	US 2001-977155	20011012
PRAI	US 2001-977155	A	20011012		
AB	The invention provides methods and compns. for modeling and detecting LDL receptor transmembrane signaling by detecting proteolysis of an LDL receptor transmembrane domain. The method comprises the steps of: (a) providing a sample comprising a cell membrane comprising (i) a polypeptide comprising an LDL receptor transmembrane domain fused to a C-terminal tail , and (ii) a protease which specifically cleaves the domain and thereby releases the tail from the membrane; (b) incubating the sample under conditions wherein the protease cleaves the domain and thereby releases the tail from the membrane; and (c) detecting a resultant released tail.				
ST	LDL receptor signaling proteolysis assay transmembrane domain				
IT	Antigens				
	RL: ANT (Analyte); ANST (Analytical study) (Heymann's; assays for the identification of LDL receptor signaling modulators by monitoring the proteolysis of an LDL receptor transmembrane domain)				
IT	Lipoprotein receptors				
	RL: ANT (Analyte); ANST (Analytical study) (LDL , MEGF7; assays for the identification of LDL receptor signaling modulators by monitoring the proteolysis of an LDL receptor transmembrane domain)				
IT	Lipoprotein receptors				
	RL: ANT (Analyte); ANST (Analytical study) (LDL ; assays for the identification of LDL receptor signaling modulators by monitoring the proteolysis of an LDL receptor transmembrane domain)				
IT	Lipoprotein receptors				
	RL: ANT (Analyte); ANST (Analytical study) (SORL1; assays for the identification of LDL receptor signaling modulators by monitoring the proteolysis of an LDL				

receptor transmembrane domain)

IT Lipoprotein receptors
 RL: ANT (Analyte); ANST (Analytical study)
 (VLDL; assays for the identification of **LDL** receptor signaling modulators by monitoring the proteolysis of an **LDL** receptor transmembrane domain)

IT Lipoprotein receptors
 RL: ANT (Analyte); ANST (Analytical study)
 (apolipoprotein E receptor, ApoER2; assays for the identification of **LDL** receptor signaling modulators by monitoring the proteolysis of an **LDL** receptor transmembrane domain)

IT Gel electrophoresis
 (assays for the detection of an **LDL** receptor transmembrane domain proteolysis by SDS-PAGE and immunoblotting)

IT Reporter gene
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (assays for the detection of an **LDL** receptor transmembrane domain proteolysis contg. an intracellular transcription factor domain interacting with a reporter gene)

IT Protein degradation
 Signal transduction, biological
 (assays for the identification of **LDL** receptor signaling modulators by monitoring the proteolysis of an **LDL** receptor transmembrane domain)

IT Human
 (cell line; assays for the detection of an **LDL** receptor transmembrane domain proteolysis by SDS-PAGE and immunoblotting)

IT Immunoassay
 (immunoblotting; assays for the detection of an **LDL** receptor transmembrane domain proteolysis by SDS-PAGE and immunoblotting)

IT Protein motifs
 (intracellular transcription factor domain; assays for the detection of an **LDL** receptor transmembrane domain proteolysis contg. an intracellular transcription factor domain interacting with a reporter gene)

IT Cell membrane
 (membrane-native protease; assays for the identification of **LDL** receptor signaling modulators by monitoring the proteolysis of an **LDL** receptor transmembrane domain)

IT Protein motifs
 (transmembrane domain; assays for the identification of **LDL** receptor signaling modulators by monitoring the proteolysis of an **LDL** receptor transmembrane domain)

IT Receptors
 RL: ANT (Analyte); ANST (Analytical study)
 (.alpha.2-macroglobulin, LRP1b, LRP5 and LRP6; assays for the identification of **LDL** receptor signaling modulators by monitoring the proteolysis of an **LDL** receptor transmembrane domain)

IT Receptors
 RL: ANT (Analyte); ANST (Analytical study)
 (.alpha.2-macroglobulin; assays for the identification of **LDL** receptor signaling modulators by monitoring the proteolysis of an **LDL** receptor transmembrane domain)

IT 9001-92-7, Protease 338454-52-7, .gamma. Secretase
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (assays for the identification of **LDL** receptor signaling modulators by monitoring the proteolysis of an **LDL** receptor transmembrane domain)

IT 16561-29-8, Phorbol 12-myristate 13-acetate
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)
 (stimulates **LDL** receptor proteolysis; assays for the

detection of an **LDL** receptor transmembrane domain proteolysis
by SDS-PAGE and immunoblotting)

RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

- (1) Horn; The Journal of Biological Chemistry 1997, V272(21), P13608 CAPLUS
- (2) Hua; The Journal of Biological Chemistry 1996, V271(17), P10379 CAPLUS
- (3) Kim; Biochimica et Biophysica Acta 2001, V1518, P204 CAPLUS
- (4) May; The Journal of Biological Chemistry 2002, V277(21), P18736 CAPLUS
- (5) Sanchez; Archives of Biochemistry and Biophysics 2001, V389(2), P218 CAPLUS
- (6) Teesalu; Coordinated induction of extracellular proteolysis systems during
experimental autoimmune encephalomyelitis in mice 2001, V159(6), P2227
CAPLUS
- (7) Willnow; The Journal of Biological Chemistry 1994, V269(22), P15827 CAPLUS

L5 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2003 ACS on STN
 AN 2002:863505 CAPLUS
 DN 138:268826
 ED Entered STN: 14 Nov 2002
 TI Evidence of Functional Modulation of the MEKK/JNK/cJun Signaling Cascade by the Low Density Lipoprotein Receptor-related Protein (LRP)
 AU Lutz, Christina; Nimpf, Johannes; Jenny, Marcel; Boecklinger, Karl; Enzinger, Christiane; Utermann, Gerd; Baier-Bitterlich, Gabriele; Baier, Gottfried
 CS Institute for Medical Biology and Human Genetics, University and Biocenter of Vienna, Vienna, A1030, Austria
 SO Journal of Biological Chemistry (2002), 277(45), 43143-43151
 CODEN: JBCHA3; ISSN: 0021-9258
 PB American Society for Biochemistry and Molecular Biology
 DT Journal
 LA English
 CC 13-2 (Mammalian Biochemistry)
 Section cross-reference(s): 2, 3
 AB Lipoprotein receptors, such as LRP, have been shown to assemble multi-protein complexes contg. intracellular signaling mols.; however, in vivo, their signaling function is poorly understood. Using a novel LRP receptor fusion construct, a type I transmembrane protein chimera, termed sIgG-LRP (bearing the intracellular **C-terminal tail** of human LRP as recombinant fusion to a transmembrane region plus the extracellular IgG-Fc domain), we here investigated LRP signal transduction specificity in intact cells. First and similar to activated .alpha.2-macroglobulin as agonist of endogenous LRP, expression of sIgG-LRP demonstrated significant apoptosis protection. Second and similar to .alpha.2-macroglobulin-induced endogenous LRP, sIgG-LRP is sufficient to neg. modulate mitogen-induced Elk-1 and cJun (but not NF-.kappa.B) transcriptional activity. Third, expression of sIgG-LRP also impaired cJun transactivation mediated by constitutive active mutants of Rac-1 and MEKK-1. Fourth and unexpectedly, sIgG-LRP expression was found to be assocd. with a marked enhancement of mitogen-induced cJun amino-terminal kinase (JNK) activation. Fifth, confocal microscopic examn. and subcellular fractionation demonstrated that sIgG-LRP and JNK co-localize in transfected cells. Therefore, sIgG-LRP expression was found to significantly impair activation-induced translocation of JNK into the nucleus. Taken together, we here demonstrate that sIgG-LRP protein sequesters activated JNK into the plasma membrane compartment in intact cells, inhibiting nuclear activation of the JNK-dependent transcription factors Elk-1 and cJun.
 ST **LDL** receptor related protein Elk1 cJun transcription activation neuron; LRP neuron apoptosis NGF MEKK1 kinase Rac1 signal transduction; JNK2 kinase translocation nucleus LRP T lymphocyte
 IT Transcription factors
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (AP-1 (activator protein 1); low d. lipoprotein receptor-related protein in modulating NGF-induced Elk-1 and cJun transcriptional activity and in protecting neuronal cells from apoptosis)
 IT Transcription factors
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (ELK-1; low d. lipoprotein receptor-related protein in modulating NGF-induced Elk-1 and cJun transcriptional activity and in protecting neuronal cells from apoptosis)
 IT Cell membrane
 Cell nucleus
 (JNK in; functional modulation of MEKK/JNK/cJun signaling cascade by low d. lipoprotein receptor-related protein in Jurkat cells and neurons)
 IT G proteins (guanine nucleotide-binding proteins)
 RL: BSU (Biological study, unclassified); BIOL (Biological study)

(Rac1; functional modulation of MEKK/JNK/cJun signaling cascade by low d. lipoprotein receptor-related protein in Jurkat cells and neurons)

IT Transcriptional regulation
(activation; low d. lipoprotein receptor-related protein in modulating NGF-induced Elk-1 and cJun transcriptional activity and in protecting neuronal cells from apoptosis)

IT Brain
(cerebellum, granular layer; low d. lipoprotein receptor-related protein in modulating NGF-induced Elk-1 and cJun transcriptional activity and in protecting neuronal cells from apoptosis)

IT Nerve, disease
(death; low d. lipoprotein receptor-related protein in modulating NGF-induced Elk-1 and cJun transcriptional activity and in protecting neuronal cells from apoptosis)

IT Signal transduction, biological
T cell (lymphocyte)
(functional modulation of MEKK/JNK/cJun signaling cascade by low d. lipoprotein receptor-related protein in Jurkat cells and neurons)

IT Biological transport
(intracellular, of JNK; functional modulation of MEKK/JNK/cJun signaling cascade by low d. lipoprotein receptor-related protein in Jurkat cells and neurons)

IT Apoptosis
Human
(low d. lipoprotein receptor-related protein in modulating NGF-induced Elk-1 and cJun transcriptional activity and in protecting neuronal cells from apoptosis)

IT Cell death
(neuron; low d. lipoprotein receptor-related protein in modulating NGF-induced Elk-1 and cJun transcriptional activity and in protecting neuronal cells from apoptosis)

IT Receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(.alpha.2-macroglobulin; functional modulation of MEKK/JNK/cJun signaling cascade by low d. lipoprotein receptor-related protein in Jurkat cells and neurons)

IT 146702-84-3, Protein kinase MEKK-1 289899-93-0, JNK2 kinase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(functional modulation of MEKK/JNK/cJun signaling cascade by low d. lipoprotein receptor-related protein in Jurkat cells and neurons)

IT 9061-61-4, Nerve growth factor
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(low d. lipoprotein receptor-related protein in modulating NGF-induced Elk-1 and cJun transcriptional activity and in protecting neuronal cells from apoptosis)

RE.CNT 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Barnes, H; J Biol Chem 2001, V276, P19119 CAPLUS
- (2) Bauer, B; Eur J Immunol 2000, V30, P3645 CAPLUS
- (3) Bellosta, S; J Biol Chem 1995, V270, P27063 CAPLUS
- (4) Bonny, C; J Biol Chem 1998, V273, P1843 CAPLUS
- (5) Boucher, P; J Biol Chem 2002, V277, P15507 CAPLUS
- (6) Buschmann, T; Mol Cell Biol 2001, V21, P2743 CAPLUS
- (7) Cao, X; Science 2001, V293, P115 CAPLUS
- (8) Cavigelli, M; EMBO J 1995, V14, P5957 CAPLUS
- (9) Chang, L; Nature 2001, V410, P37 CAPLUS
- (10) Dickens, M; Science 1997, V277, P693 CAPLUS
- (11) Enzinger, C; Eur J Cell Biol 2002, V81, P97
- (12) Fagan, A; J Biol Chem 1996, V271, P30121 CAPLUS
- (13) Fuchs, S; Proc Natl Acad Sci 1998, V95, P10541 CAPLUS
- (14) Ghaffari-Tabrizi, N; Eur J Immunol 1999, V29, P132 CAPLUS
- (15) Gotthardt, M; J Biol Chem 2000, V275, P25616 CAPLUS

- (16) Hashimoto, A; J Biol Chem 1999, V274, P20139 CAPLUS
- (17) Hashimoto, Y; J Neurosci 2001, V20, P8401
- (18) Hatten, M; J Cell Biol 1985, V100, P384 MEDLINE
- (19) Herz, J; Cell 1992, V71, P411 CAPLUS
- (20) Herz, J; Curr Opin Lipidol 2000, V11, P161 CAPLUS
- (21) Herz, J; J Clin Invest 2001, V108, P779 CAPLUS
- (22) Herz, J; Nat Rev Neurosci 2000, V1, P51 CAPLUS
- (23) Herz, J; Neuron 2001, V29, P571 CAPLUS
- (24) Ho, Y; J Biol Chem 2001, V276, P43455 CAPLUS
- (25) Holtzman, D; Proc Natl Acad Sci 1995, V92, P9480 CAPLUS
- (26) Inamura, N; Brain Res 2001, V904, P270 CAPLUS
- (27) Kang, D; Neurology 1997, V49, P56 MEDLINE
- (28) Kerkhoff, E; Curr Biol 2001, V11, P1963 CAPLUS
- (29) Kinoshita, A; J Neurosci 2001, V21, P8354 CAPLUS
- (30) Kobayashi, K; Biochim Biophys Acta 2001, V1537, P79 CAPLUS
- (31) Kolanus, W; Cell 1993, V74, P171 CAPLUS
- (32) Kounnas, M; Cell 1995, V82, P331 CAPLUS
- (33) Krieger, M; Annu Rev Biochem 1994, V63, P601 MEDLINE
- (34) Logan, S; Mol Cell Biol 1997, V17, P5784 CAPLUS
- (35) Lopez-Illasaca, M; Science 1997, V275, P394 CAPLUS
- (36) Loukinova, E; J Biol Chem 2002, V277, P15499 CAPLUS
- (37) Mao, B; Nature 2001, V411, P321 CAPLUS
- (38) Marzolo, M; J Neurosci Res 2000, V60, P401 CAPLUS
- (39) Matsuda, S; J Neurosci 2001, V21, P6597 CAPLUS
- (40) May, P; J Biol Chem 2002, V277, P18736 CAPLUS
- (41) Narita, M; J Neurochem 1997, V68, P587 CAPLUS
- (42) Otto, I; Curr Biol 2000, V10, P345 CAPLUS
- (43) Pinson, K; Nature 2000, V407, P535 CAPLUS
- (44) Postuma, R; FEBS Lett 1998, V428, P13 CAPLUS
- (45) Romeo, C; Cold Spring Harbor Symp Quant Biol 1992, V57, P117 CAPLUS
- (46) Roses, A; Curr Opin Biotechnol 1994, V5, P663 CAPLUS
- (47) Rozemuller, J; Res Immunol 1992, V143, P646 MEDLINE
- (48) Russo, T; FEBS Lett 1998, V434, P1 CAPLUS
- (49) Scheinfeld, M; J Biol Chem 2002, V277, P3767 CAPLUS
- (50) Sheng, J; Acta Neuropathol 1997, V94, P1 MEDLINE
- (51) Sluss, H; Genes Dev 1996, V10, P2745 CAPLUS
- (52) Stockinger, W; J Biol Chem 2000, V275, P25625 CAPLUS
- (53) Tamai, K; Nature 2000, V407, P530 MEDLINE
- (54) Trommsdorff, M; Cell 1999, V97, P689 CAPLUS
- (55) Trommsdorff, M; J Biol Chem 1998, V273, P33556 CAPLUS
- (56) Verhey, K; J Cell Biol 2001, V152, P959 CAPLUS
- (57) Villunger, A; Eur J Immunol 1999, V29, P3549 CAPLUS
- (58) Weidemann, A; Biochemistry 2002, V41, P2825 CAPLUS
- (59) Whitmarsh, A; Genes Dev 2001, V15, P2421 CAPLUS
- (60) Whitmarsh, A; Nature 2000, V403, P255 CAPLUS
- (61) Willnow, T; J Biol Chem 1994, V269, P15827 CAPLUS
- (62) Yasuda, J; Mol Cell Biol 1999, V19, P7245 CAPLUS
- (63) Zeitlmann, L; J Biol Chem 1998, V273, P15445 CAPLUS
- (64) Zhu, Y; Arterioscler Thromb Vasc Biol 1998, V18, P473 CAPLUS
- (65) Zhuo, M; J Neurosci 2000, V20, P542 CAPLUS

L5 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
 AN 2003:326371 BIOSIS
 DN PREV200300326371
 TI NOVEL SYNAPTIC PROTEIN, SHORT FORM **LDL** RECEPTOR-RELATED PROTEIN
 (S-LRP) , A MEMBER OF LOW DENSITY LIPOPROTEIN GENE FAMILY IN THE RAT
 BRAIN.
 AU Tian, Q. B. [Reprint Author]; Okano, A. [Reprint Author]; Miyazawa, S.
 [Reprint Author]; Usuda, N.; Suzuki, T. [Reprint Author]
 CS Neuroplasticity, Shinshu Univ Sch Med, Matsumoto, Japan
 SO Society for Neuroscience Abstract Viewer and Itinerary Planner, (2002)
 Vol. 2002, pp. Abstract No. 746.4. <http://sfn.scholarone.com>. cd-rom.
 Meeting Info.: 32nd Annual Meeting of the Society for Neuroscience.
 Orlando, Florida, USA. November 02-07, 2002. Society for Neuroscience.
 DT Conference; (Meeting)
 Conference; Abstract; (Meeting Abstract)
 LA English
 ED Entered STN: 16 Jul 2003
 Last Updated on STN: 16 Jul 2003
 AB We have cloned from rat brain a novel gene, which encoded a new member of
 low density lipoprotein receptor (LDLR) family protein. The protein,
 although shorter in length, resembled the **LDL** receptor-related
 protein (LRP) in its structure, possessing LDLR class A domains, possibly
 ligand-binding motifs, EGF-like domains, YWTD domains, a single
 membrane-spanning domain, and a NPXY motif. Thus, we named the protein as
 short form LDLR-related protein (sLRP). Uniquely, the sLRP possessed a
 PDZ motif-binding sequence, SQV, at the C-terminal end, and indeed, the
 protein interacted with postsynaptic density (PSD)-95 and
 synapse-associated protein (SAP) 97 via its **C-terminal**
tail sequence. Interaction with these PDZ domain-containing
 proteins suggests the association with PSD and coupling of N-methyl D
 aspartate (NMDA) type and alpha-amino-3-hydroxy-5-methyl-4-
 isoxazolepropionic acid (AMPA)-type glutamate receptor complexes via
 PSD-95 and SAP97, respectively. Immunohistochemistry using antibody
 against carboxyl-terminal protein revealed dendritic localization of the
 sLRP protein at the light microscopic level. The mRNA was also localized
 to the dendrite and its expression was up-regulated by kainic acid
 treatment of the animals. These data suggest a unique role of sLRP in the
 synaptic region via an endocytosis of certain ligands.
 CC General biology - Symposia, transactions and proceedings 00520
 Biochemistry studies - General 10060
 Biochemistry studies - Nucleic acids, purines and pyrimidines 10062
 Biochemistry studies - Proteins, peptides and amino acids 10064
 Biochemistry studies - Lipids 10066
 Endocrine - Neuroendocrinology 17020
 Nervous system - Physiology and biochemistry 20504
 IT Major Concepts
 Biochemistry and Molecular Biophysics; Nervous System (Neural
 Coordination)
 IT Parts, Structures, & Systems of Organisms
 brain: nervous system
 IT Chemicals & Biochemicals
 synaptic protein; short form **LDL** receptor-related protein
 [S-LRP]; low-density lipoprotein [**LDL**]; low density
 lipoprotein receptor; N-methyl-D-aspartate [NMDA]; alpha-amino-3-
 hydroxy-5-methyl-4-isoxazolepropionic acid [AMPA]; mRNA [messenger RNA]
 ORGN Classifier
 Muridae 86375
 Super Taxa
 Rodentia; Mammalia; Vertebrata; Chordata; Animalia
 Organism Name
 rat (common)
 Taxa Notes

Animals, Chordates, Mammals, Nonhuman Vertebrates, Nonhuman Mammals,
Rodents, Vertebrates

RN 6384-92-5 (N-methyl-D-aspartate)

6384-92-5 (NMDA)

77521-29-0 (alpha-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid)

77521-29-0 (AMPA)

L5 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2003 ACS on STN
 AN 1989:492446 CAPLUS
 DN 111:92446
 ED Entered STN: 16 Sep 1989
 TI Surface location and high affinity for calcium of a 500-kd liver membrane protein closely related to the **LDL**-receptor suggest a physiological role as lipoprotein receptor
 AU Herz, Joachim; Hamann, Ute; Rogne, Sissel; Myklebost, Ola; Gausepohl, Heinrich; Stanley, Keith K.
 CS Eur. Mol. Biol. Lab., Heidelberg, D-6900, Fed. Rep. Ger.
 SO EMBO Journal (1988), 7(13), 4119-27
 CODEN: EMJODG; ISSN: 0261-4189
 DT Journal
 LA English
 CC 6-3 (General Biochemistry)
 Section cross-reference(s): 13
 AB A cell surface protein that is abundant in liver and has close structural and biochem. similarities to the low-d. lipoprotein (**LDL**) receptor is described. The cDNA was characterized and the complete sequence of the protein contg. 4544 amino acids is presented. From the sequence a remarkable resemblance to the **LDL**-receptor and EGF precursor is apparent. Three types of repeating sequence motifs entirely account for the extracellular domain of the mol. These are arranged in a manner resembling 4 copies of the ligand-binding and the EGF-precursor-homologous region of the **LDL**-receptor. Following a proline-rich segment of 17 amino acids are found 6 consecutive repeats with close homol. to EGF. A single membrane-spanning segment precedes a **C-terminal tail** of 100 amino acids. This contains 2 7-amino acid sequences with striking homol. to the cytoplasmic tail of the **LDL**-receptor in the region that contains the signal for clustering into coated pits. The mRNA for this protein is most abundant in liver, brain, and lung. By using an antibody raised against a 13-amino-acid peptide corresponding to the deduced amino acid sequence of the C-terminus of the protein, its existence on the cell surface and its abundance in liver was demonstrated. Like the **LDL** receptor, this protein also strongly binds Ca, a cation absolutely required for binding of apolipoproteins B and E to their receptors. It is proposed that this **LDL**-receptor related protein (LRP) is a recycling lipoprotein receptor with possible growth-modulating effects.
 ST protein low density lipoprotein receptor sequence; low density lipoprotein receptor liver membrane; sequence low density lipoprotein receptor liver; EGF precursor lipoprotein receptor liver; calcium binding protein liver lipoprotein receptor
 IT Receptors
 RL: BIOL (Biological study)
 (for low-d. lipoprotein, low-d. lipoprotein receptor-related protein LRP of liver membrane homol. with)
 IT Cell membrane
 (low-d. lipoprotein receptor-related protein LRP of liver, characterization and function of)
 IT Liver, composition
 (low-d. lipoprotein receptor-related protein LRP of membrane of, characterization and function of)
 IT Brain, composition
 Intestine, composition
 Lung, composition
 Muscle, composition
 Organ
 (low-d. lipoprotein receptor-related protein LRP-specifying mRNA of)
 IT Protein sequences
 (of low-d. lipoprotein receptor-related protein LRP, of human liver membrane, complete)

IT Proteins, specific or class
 RL: BIOL (Biological study)
 (LRP (low-d. lipoprotein receptor-related protein), of liver membrane,
 of human , surface distribution and characterization and function of)

IT Proteins, specific or class
 RL: PRP (Properties)
 (LRP (low-d. lipoprotein receptor-related protein), pre-, amino acid
 sequence of, of liver membrane of human)

IT Lipoproteins
 RL: BIOL (Biological study)
 (low-d., receptor for, low-d. lipoprotein receptor-related protein LRP
 of liver membrane homol. with)

IT Ribonucleic acids, messenger
 RL: PROC (Process)
 (protein LRP (low-d. lipoprotein receptor-related protein)-specifying,
 tissue distribution of, in mouse)

IT 122303-69-9, Glycoprotein LRP (human clone LRP-9/LRP-4/LRP-6/LRP-8 protein
 moiety reduced) 122303-70-2
 RL: PRP (Properties)
 (amino acid sequence of)

IT 7440-70-2, Calcium, biological studies
 RL: BIOL (Biological study)
 (low-d. lipoprotein receptor-related protein LRP of human brain and
 liver membrane affinity for)

=>

L10 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 3
 AN 1997:675278 CAPLUS
 DN 127:344162
 TI The fate of lipoprotein cholesterol entering the arterial wall
 AU Kruth, Howard S.
 CS Section of Experimental Atherosclerosis, National Heart, Lung, and Blood
 Institute, National Institutes of Health, Bethesda, MD, 20892-1422, USA
 SO Current Opinion in Lipidology (1997), 8(5), 246-252
 CODEN: COPLEU; ISSN: 0957-9672
 PB Rapid Science Publishers
 DT Journal; General Review
 LA English
 CC 13-0 (Mammalian Biochemistry)
 AB A **review** with 68 refs. Recent findings have helped to explain
 the fate of cholesterol entering the arterial wall. **LDL** can
 undergo both fusion and aggregation. These changes may cause increased
 retention of **LDL** in lesion connective tissue matrix and
LDL uptake by macrophages. In the cornea, apparent fusion of
LDL occurs in the absence of macrophages. Mast cells may be
 important in **LDL** fusion, as mast cell-derived proteases can
 induce fusion of **LDL** through **proteolysis** of
 apolipoprotein B. **LDL** in arterial wall atherosclerotic lesions
 was found to be sialic acid-poor and ceramide-enriched. These chem.
 changes promote **LDL** aggregation. Processes that may function to
 remove cholesterol from the arterial wall have been reported.
 Macrophage-produced apolipoprotein E can mediate macrophage cholesterol
 efflux and macrophages can convert cholesterol to 27-oxygenated products
 that macrophages excrete. Alternately, another oxygenated sterol,
 7-ketocholesterol, impairs macrophage cholesterol efflux. In addn.,
 mast-cell derived chymase proteolyzes HDL and reduces its capacity to
 stimulate cholesterol efflux.
 ST **review** lipoprotein cholesterol transport artery atherosclerosis
 IT Artery
 (fate of lipoprotein cholesterol entering arterial wall)
 IT Lipoproteins
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (fate of lipoprotein cholesterol entering arterial wall)
 IT Atherosclerosis
 Biological transport
 Fusion, biological
 Macrophage
 Molecular association
 (fate of lipoprotein cholesterol entering arterial wall in relation to)
 IT Lipoproteins
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (low-d.; fate of lipoprotein cholesterol entering arterial wall)
 IT 57-88-5, Cholesterol, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (fate of lipoprotein cholesterol entering arterial wall)

L10 ANSWER 10 OF 12 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 3
 AN 1997:675278 CAPLUS
 DN 127:344162
 TI The fate of lipoprotein cholesterol entering the arterial wall
 AU Kruth, Howard S.
 CS Section of Experimental Atherosclerosis, National Heart, Lung, and Blood
 Institute, National Institutes of Health, Bethesda, MD, 20892-1422, USA
 SO Current Opinion in Lipidology (1997), 8(5), 246-252
 CODEN: COPLEU; ISSN: 0957-9672
 PB Rapid Science Publishers
 DT Journal; General Review
 LA English
 CC 13-0 (Mammalian Biochemistry)
 AB A **review** with 68 refs. Recent findings have helped to explain
 the fate of cholesterol entering the arterial wall. **LDL** can
 undergo both fusion and aggregation. These changes may cause increased
 retention of **LDL** in lesion connective tissue matrix and
LDL uptake by macrophages. In the cornea, apparent fusion of
LDL occurs in the absence of macrophages. Mast cells may be
 important in **LDL** fusion, as mast cell-derived proteases can
 induce fusion of **LDL** through **proteolysis** of
 apolipoprotein B. **LDL** in arterial wall atherosclerotic lesions
 was found to be sialic acid-poor and ceramide-enriched. These chem.
 changes promote **LDL** aggregation. Processes that may function to
 remove cholesterol from the arterial wall have been reported.
 Macrophage-produced apolipoprotein E can mediate macrophage cholesterol
 efflux and macrophages can convert cholesterol to 27-oxygenated products
 that macrophages excrete. Alternately, another oxygenated sterol,
 7-ketocholesterol, impairs macrophage cholesterol efflux. In addn.,
 mast-cell derived chymase proteolyzes HDL and reduces its capacity to
 stimulate cholesterol efflux.
 ST **review** lipoprotein cholesterol transport artery atherosclerosis
 IT Artery
 (fate of lipoprotein cholesterol entering arterial wall)
 IT Lipoproteins
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (fate of lipoprotein cholesterol entering arterial wall)
 IT Atherosclerosis
 Biological transport
 Fusion, biological
 Macrophage
 Molecular association
 (fate of lipoprotein cholesterol entering arterial wall in relation to)
 IT Lipoproteins
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (low-d.; fate of lipoprotein cholesterol entering arterial wall)
 IT 57-88-5, Cholesterol, biological studies
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
 (Biological study); PROC (Process)
 (fate of lipoprotein cholesterol entering arterial wall)